

Attorney Docket No.: UMD0067US.NP  
Inventors: Welsh et al.  
Serial No.: 10/565,417  
Filing Date: August 3, 2006  
Page 4

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method of imputing missing values in microarray data comprising the steps of:

- (a) clustering the data by a Gaussian mixture clustering (GMC) model; ~~and~~
- (b) estimating missing values by a GMCimpute algorithm ~~thereby imputing~~ so that missing values in microarray data are imputed; ~~and~~
- (c) outputting the missing values to a display or memory.

Claim 2 (currently amended): The method of claim 1, wherein the Gaussian mixture clustering (GMC) model comprises the steps of

- (a) determining a value of K (number of clusters) for microarray data comprising rows and columns;
- (b) partitioning the rows of the microarray data into K partitions; ~~and~~
- (c) repeating a Classification Expectation-Maximization algorithm until the K partitions converge.

Claim 3 (currently amended): A computer-readable medium encoded with a computer program ~~product comprising a computer software program~~, wherein the computer ~~software~~ program, once executed by a computer processor, performs a method of imputing

Attorney Docket No.: **UMD0067US.NP**  
Inventors: **Welsh et al.**  
Serial No.: **10/565,417**  
Filing Date: **August 3, 2006**  
Page 5

missing values in microarray data according to the method of claim 1.

Claim 4 (currently amended): The computer program ~~product~~ of claim 3, wherein the Gaussian mixture clustering (GMC) model comprises the steps of

(a) determining a value of  $K$  (number of clusters) for microarray data comprising rows and columns;

(b) partitioning the rows of the microarray data into  $K$  partitions; and

(c) repeating a Classification Expectation-Maximization algorithm until the  $K$  partitions converge.

Claims 5-8 (canceled).